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14. ABSTRACT

This is a requirements analysis for primary care at Womack Army Medical Center as it endeavors to support Ft. Bragg and Pope Air Force Base's transition under Base Realignment and Closure (BRAC), the Army Campaign Plan, and the Army Transformation Plan from fiscal years 06-11. Results of this requirements analysis indicate that Womack must increase staffing, medical facilities, equipment, and funding in order to provide access to care for current beneficiaries and projected beneficiaries. It is anticipated that beneficiaries enrolled to Womack's primary care clinics will increase by 19,663 to a total of 122,720. This analysis determined that Womack must increase providers by approximately 19 full-time equivalents (FTEs) and support staff by 54 FTEs at a cost of $2.8 million to adequately support the current population. To support the increase in population, Womack must increase providers by 68 FTEs and support staff by 47 FTEs, at a cost of $4.7 million. In addition to staff increases, Womack has determined that two additional medical treatment facilities are necessary to accommodate growth; the cost for those will be $29 million.

15. SUBJECT TERMS
A requirements analysis to develop a primary care expansion plan due to the beneficiary population growth of Womack Army Medical Center due to Base Realignment and Closure, the Army Campaign Plan, and the Army Transformation Plan

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Graduate Management Project

A Requirements Analysis for Primary Care at Womack Army Medical Center

Presented To

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Abstract

This graduate management project is a requirements analysis for primary care at Womack Army Medical Center as it endeavors to support Ft. Bragg and Pope Air Force Base's transition under Base Realignment and Closure (BRAC), the Army Campaign Plan, and the Army Transformation Plan from fiscal years (FYs) 06-11. Results of this requirements analysis indicate that Womack must increase staffing, medical facilities, equipment, and funding in order to provide access to care for current beneficiaries and projected beneficiaries.

It is anticipated that beneficiaries enrolled to Womack's primary care clinics will increase by 19,663 to a total of 122,720. The beneficiaries include Army and Air Force active duty soldiers and their family members and retirees and their family members. This analysis determined that Womack must increase providers by approximately 19 full-time equivalents (FTEs) and support staff by 54 FTEs at a cost of $2.8 million to adequately support the current population. To support the increase in population caused by the projected BRAC, the Army Campaign Plan, and the Army Transformation Plan, Womack must increase providers by 68 FTEs and support staff by 47 FTEs, at a cost of $4.7 million. In addition to staff increases, Womack has determined that two additional medical treatment facilities are necessary to accommodate growth; the cost for those will be $29 million.

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Introduction

Womack is an Army Medical Center and is designated as a Level III trauma center.[1] It is a 1,028,250 square foot facility with a 153 bed capacity and the capability to expand to 258 beds. Womack provides a full range of healthcare support to Ft. Bragg and more than 175,000 eligible beneficiaries, while ensuring the medical readiness of all active duty, Reserve, and National Guard units assigned to, or deploying through, Ft. Bragg.

Fort Bragg, located in Fayetteville, NC, is home to the XVIII Airborne Corps, the 82nd Airborne Division, and the U.S. Special Operations Command. Womack provides care to three garrison locations: Ft. Bragg, Pope Air Force Base, and Simmons Army Airfield (Womack Business Plan, 2005).

Womack is responsible for meeting the healthcare needs of beneficiaries residing within its 40 mile catchment area.[2] Such healthcare needs can be met within Womack or within the TRICARE

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[1] There are four levels of trauma care. The four levels refer to the kinds of resources available and the number of patients admitted yearly. A Level III trauma center does not have the specialists available, but does have resources for the emergency resuscitation, surgery, and intensive care of most trauma patients. A Level III center has transfer agreements with Level I and/or Level II trauma centers to provide back-up for the care of exceptionally severe injuries (American College of Surgeons, 2005).

[2] TRICARE defines a catchment area as the geographic area served by a hospital, clinic, or dental clinic. It is delineated on the basis of such factors as population distribution, natural geographic boundaries, and transportation accessibility. For the Department of Defense components, those geographic areas are determined by the Assistant Secretary of Defense and are defined by a set of 5-digit zip codes, usually within an approximate 40-mile radius of military inpatient treatment facilities (Health Affairs, 2003).

network. Within Womack's catchment area, beneficiaries include 50,115 active duty soldiers,[3] 68,072 family members of active duty personnel, and 58,181 retirees and families (Womack Business Plan, 2005). The large retiree population includes 4,700 TRICARE Plus[4] beneficiaries. Although retirees and their family members account for nearly a third of the overall eligible beneficiaries, only a small percentage of these beneficiaries are enrolled to Womack because it lacks capacity (Womack Business Plan, 2005).

Conditions that Prompted the Study

Fort Bragg and its neighboring installation, Pope Air Force Base, have been affected by three major Department of Defense (DoD) programs and plans: Base Realignment and Closure (BRAC),[5] the Army Campaign Plan, and the Army Transformation Plan. These programs and plans have also affected the medical facilities and operations in Womack's catchment area.

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[3] Ft. Bragg's 50,115 soldiers represent the largest troop strength and the most frequently deployed forces in the Army's inventory.

[4] TRICARE Plus is a TRICARE program for beneficiaries 65 years and older who wish to be empanelled into a military medical treatment facility.

[5] The BRAC Commission was established by Public Law 101-510 to provide Congress and the President with recommendations on the realignment or closure of military installations. Its work resulted in plans and actions to reconfigure DoD infrastructure to improve operational and support capabilities and efficiency. The reconfirmation should further defense transformation and maximize joint service utilization of DoD resources. It will also restructure the personnel system to ensure that the individuals who have the required skills will be available. It will also facilitate economies of scale within DoD's physical infrastructure by consolidating activities at major locations and eliminating underutilized camps, posts, and bases. By restructuring, DoD will save taxpayers money (Department of Defense Base Realignment and Closure Report, 2005).

A total of 38 units on Ft. Bragg and Pope Air Force Base will be affected, with 20 of them experiencing some type of transition in fiscal year (FY) 06. These changes will result in an increase of 19,663 beneficiaries between FYs 06-11 and will require a primary care enrollment expansion plan to accommodate the growth. The plan will provide for active duty soldiers, family members, and retiree beneficiaries, all of whom will be assigned to one of four primary care clinics on Ft. Bragg: Robinson, Joel, Clark, or Womack Family Medicine Clinic.

One outcome of the BRAC Commission was the Department of the Army's (DA) recommendation to the Secretary of Defense that realignment take place on Ft. Bragg. This recommendation, which was approved, directs the 7th Special Forces Group to transfer to Eglin Air Force Base, FL, the 82nd Airborne Division to add a 4th Brigade Combat Team, and Forces Command and US Army Reserve Command to transfer to Ft. Bragg, NC. In addition, neighboring Pope Air Force Base is scheduled to turn over the majority of its infrastructure to the Army by FY 09, although the Air Force will continue to maintain the flight line (Department of Defense Base Closure and Realignment Report, 2005).

The second program impacting Fort Bragg's population is the Army Campaign Plan.[6] It will relocate the 108th Air Defense

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[6] Department of the Army developed the Army Campaign Plan in 2004 with the sole purpose of increasing capability for a wide range of missions. The ultimate goal is to redefine the culture of the Army organization by enhancing wartime decision-making, incorporating warrior ethos,

Brigade from Ft. Bliss, TX, activate the 192nd Ordnance Battalion, convert the units within the 16th Military Police Brigade to Combat Support Company elements, and inactivate or convert the units within the 525th Military Intelligence Brigade (Army Campaign Plan, 2005).

The third impacting force is the Army Transformation Plan.[7] Former Army Chief of Staff of the Army, General Eric K. Shinseki, announced in October 1999 that the Army was developing plans to transform its current Cold War organization and equipment to a lighter, more strategically responsive force to fill what it sees as a strategic gap in current war fighting capabilities. The Army believes that transformation is necessary to respond more efficiently to the growing number of peacekeeping and small-scale operations and the challenges posed by threats such as weapons of mass destruction and terrorism (Army Transformation Plan, 2001). The Army Transformation Plan

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revising European/Pacific basing, and integrating with joint forces and other nations. It was also designed to optimize capabilities by increasing the number of high demand units, reducing the number of heavy units, increasing infantry, military police and civil affairs units, and facilitating faster deployments by forming more interchangeable units. The aim was to redesign Army divisions into smaller brigade-size units, increase the manning in these units, and standardize the design. The Army Campaign Plan has a secondary outcome of relieving stress on families by reducing the number of permanent change of station moves, increasing tour lengths, increasing the number of units, and providing more predictable deployment schedules (Army Campaign Plan, 2005).

[7] The Army Transformation Plan, a 30-year plan, calls for the Army to be capable of deploying within a short period of time - 96 hours for anywhere in the world for combat brigades, 120 hours for a division; and 30 days for five divisions. To do this, the Army plans to develop new equipment, transform its concepts and doctrine, build unit organizations that can easily adapt to operational changes, and change how it trains soldiers and leaders. The Army's current combat force is made up of (a) heavy artillery units, (b) other active duty combat forces, and (c) Army Reserve and National Guard Forces. These units will all transform into the Objective Force under this plan (Army Transformation Plan, 2001).

affects Ft. Bragg by expanding 3rd Special Forces Group in increments from FYs 06-09.

Statement of the Problem

The BRAC, the Army Campaign Plan, and the Army Transformation Plan have a large impact on Ft. Bragg. Womack will experience a beneficiary population growth of 19,663 between FYs 06-11 as units relocate to the installation, current units transform, and personnel strengths increase. To support this population increase, Womack must analyze its current primary care services and workload to accurately assess its capabilities and project its future workload.

The analysis must be addressed incrementally: first, meeting the current workload demand; and, second, preparing for the future patient workload demands. This first problem, how to meet the current workload, will be addressed by assessing current capabilities and determining if primary care expansion is required. The second problem, how to project and meet the future workload demand, will be addressed by projecting the future beneficiary population and requirements. These analyses will be instrumental in developing an expansion plan to provide primary care to the increased population.

Considerations

Currently Womack's Directorate of Primary Care is understaffed to meet workload demand, as Womack determined by

the Automated Staffing Assessment Model (ASAM) III[8]. According to the ASAM III model, one full-time equivalent[9] (FTE) primary care provider is needed for every 1,178 enrollees, based on a population of 100,000 enrolled beneficiaries (Automated Staffing Assessment Model III, 2005). The directorate has a shortfall: 83 FTEs of primary care providers are needed, but there are currently only 67. This insufficient staffing impacts quality and access to primary care as reported in Womack's Review and Analysis Briefing (COL John Lammie, Chief of Directorate of Primary Care, personal communication, May 2006). This issue is further exacerbated by the 6 to 8 months it takes to recruit and hire general schedule (GS) or contract primary care physicians (MAJ Sharon Henderson, Chief of Managed Care Division, personal communication, January 2006). In order to provide care for current demand, Womack must increase its number of primary care providers.

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[8] The Automated Staffing Assistance Model (ASAM) III is a staffing model accepted by the US Army Medical Command to establish military healthcare facilities' manpower requirements (Automated Staffing Assistance Model, 2005).

[9] Full-time Equivalent (FTE) is considered to be a unit of provider productivity: one FTE equates to a specific number of patient visits per unit of time. FTE equates full-time employees working 8 hours per day and 40 hours per week (Automated Staffing Assistance Model, 2005).

Table 1
Staffing provider model for the directorate of primary care per the Automated Staffing Assessment Model III

Clinic	*Enrollment	Available primary care providers	Required primary care providers	Additional primary care providers
Robinson	24,092	9.5	21	11.5
Clark	36,191	24	30.72	6.72
Joel	20,527	17.8	18	0
Womack	17,042	16	15	1
Total	97,852	67.3	83	19.2

*Note: FY 05 enrollment of beneficiaries is depicted in the table.

Another factor influencing the hiring of providers is the cost per FTE provider. The overall cost consists of more than a physician's salary. The funding for hiring providers also accounts for the salaries of the support staff. Hiring both providers and the required support staff will ensure the ASAM III staffing requirements are met and the proper mix to treat the beneficiaries is available. Depending on clinical requirements, the 2.8:1.0 (per ASAM III) ratio of support staff to provider can consist of a combination of a registered nurse, a licensed practical nurse, a certified nursing assistant, or a medical clerk.

Womack, through its human resource division, is developing incentives to entice individuals to seek employment as GS civilians. Such employees are less expensive than contract

employees because general schedule salaries are based on established government tables (Office of Personnel Management, 2006), while a contractor's salary is based on an industry standard cost or a salary plus contracting agency's overhead cost (MAJ Sharon Henderson, Chief, Managed Care, personnel communication, January 2006). The GS salaries used in this analysis include base salary, location pay, benefits, entitlements, and professional pay incentives for providers.

Table 2
Salary comparison between general schedule (GS) and contract employees

	Pay Grade	GS Salary	Contract Cost
Providers			
Family Physicians	GS14	$184,790	$187,865
Pediatrician	GS14	$184,790	$189,779
Internal Medicine	GS14	$184,790	$200,952
Direct Care Providers			
Nurse Practitioner	GS12	$112,389	$173,066
Physicians Assistant	GS12	$112,389	$173,066
Total		$779,148	$924,728

A third impacting factor is the size of each of the primary care clinics. Clark Health Clinic is the largest medical clinic within DoD with 57,000 square feet. It was built to support 33,000 patients and currently has an enrollment of 36,000 (Sheri Lasater, Health Systems Specialist for Clark Health Clinic,

personal communication, May 2006). Robinson Health Clinic supports the 82nd Airborne Division and will experience a majority of the population increase in FY 06. This clinic is 30,000 square feet and has an enrollment of 24,000 patients. Joel Health Clinic supports many of the retired beneficiaries and the fewest number of active duty soldiers of all the primary care clinics. It is 26,000 square feet and has a current enrollment of 20,000 patients. The Womack Family Medicine Clinic is located within Womack and supports the family medicine residency program. It is approximately 15,000 square feet and has 17,000 enrollees. Each of these clinics has reached its enrollment capacity, when compared to the number of available providers. It is a requirement from the Healthcare Facility Planning Agency that each provider have an office and examination room (Mr. Al Cherry, Chief of Facilities, personal communication, June 2006). Currently providers in each of the clinics are sharing office and exam room space. This study will determine how much space is required and if additional medical facilities are required to support the population growth.

Literature Review

The literature review addresses staffing models for determining the primary workforce structure that is required for the enrolled population in primary care. It also addresses the

factors concerning the future of primary care. Furthermore, it provides references for determining the most efficient size of, and layout for, primary care clinics.

Workforce planning is a dynamic process that ensures primary care teams have the right people, the right skills, and are in the right place. This means the process used to determine the workforce of today and of the future needs to be a rigorous one, using knowledge held within organizations and supported by techniques that assess future scenarios. The workforce needs of an organization should be articulated in the form of a plan that reflects what is known about current and future requirements and can also be used as a means for assessing when new roles or skills are needed. A planned workforce encompasses succession planning, skill mix reviews, education and training, recruitment and retention, continuing professional development, and career development (United Kingdom's Department of Health, 2001).

To develop a complete primary care plan, both current and future demand must be taken into consideration. To plan for future demand, drivers, i.e. factors likely to bring about changes in service delivery or the workforce, must be identified. Such drivers fall into one of two main categories: environmental drivers, conditions which are largely outside the control of the healthcare system, such as demographic trends and new technologies; or policy drivers, conditions where national

or local action can be taken to drive change (United Kingdom's Department of Health, 2001).

Some key environmental drivers in primary care were identified as (a) demographic changes leading to the population making increased demands, (b) medical initiatives to improve clinical standards, (c) other initiatives to improve the quality of services and have an impact on workload, and (d) changes in acute care such as new technology (United Kingdom's Department of Health, 2001). The suggested action for developing a primary care workforce is to identify the resources required based on the identified key drivers, which will impact the workforce and beneficiaries.

Staffing Models

Due to the impact of environmental drivers, such as BRAC, the Army Campaign Plan, and the Army Transformation Plan, Womack must review and update its current primary care enrollment plan to ensure it can meet the demand of a growing population. There are multiple enrollment models that might be used, such as the TRICARE Regional Enrollment Capacity Model, the Bremerton Optimization Model, and the ASAM III staffing Model.

An enrollment model presented by LCDR James E. LaMar II, Dr. Itzhak Jacoby, MAJ Gregg S. Meyer, and Allison Potter (1997) illustrates the total number and mix of health care providers required within a TRICARE network to serve a specific

population. The authors stated the key to successful staffing is a matter of appropriate size based on the enrolled population. If too few providers are available, TRICARE access standards will not be met, resulting in poor patient satisfaction and overburdened providers. If the provider pool is too large, the providers will be underutilized and resources will be wasted (LaMar, et al., 1997). The authors' mathematical model was proposed to assist in determining the appropriate provider pool for TRICARE. The model incorporates the regions enrolled beneficiary population, provider population, and TRICARE access standards as variables. This workforce model is only applicable to the peacetime mission of the military health system. It does not account for the military's medical readiness mission (LaMar, et al, 1997).

The study's staffing model included input from Weiner and Cooper (LaMar, et al., 1997), authors selected based on their dominance in physician manpower requirements research. Weiner and Cooper estimated that 146.4 primary care providers are required for a beneficiary population of 100,000. LaMar et al., made some adjustments to this estimate to reflect the military population and the readiness requirement. Once the adjustments were reflected in the model, they estimated that 156 providers would be required for a 100,000 beneficiary population, with

approximately 641 beneficiaries to be enrolled to each provider (LaMar, et al., 1997).

The Bremerton Enrollment Capacity Study is another military enrollment study that attempts to optimize the capacity of each provider. To conduct this study a team was assembled consisting of representatives from primary care and specialty care, managed care administrators, and enlisted service members. It determined that a significant amount of a clinician's time was spent on military readiness, resident training, and indirect patient care tasks. The study is particularly noteworthy in that is accounts for the actual costs of military training, readiness, residency training, and indirect patient care, as experienced at an MTF (Helmers, 2001). The Bremerton Model's average enrollment capacity for each primary care provider was 791, determined using the following equation: Enrollees per primary care provider = 1/visits per enrollee x visits per hour x "actual" hours per full-time equivalent.

A second model the Bremerton study addressed was the health maintenance organization model, which suggested a capacity of 1,879 enrollees to provider, at the expense of residency training and readiness. A third model focused on reducing the indirect patient care activities while maintaining readiness and residency training. The third model would result in a capacity increase to 1,573 patients to provider and require each provider

to work 160 days per year. This option was found to best optimize enrollment capacity for the Bremerton Naval Facility (Helmers, 2001).

The ASAM III model, the model accepted by the U.S. Army Medical Command, provides staffing requirements for a MTF. Within this model, providers have three patient encounters every hour (22-23 patients per day) and work 21 days per month (483 patients per month). There are 41 hours of non-available time built into the provider's template, including 22 hours a month of Army standard non-availability time[10] for military providers, 3 hours a month of continuing education (36 hours per year) for both military and civilian providers, and 15 hours of military readiness. The model also includes a support staff to primary care provider ratio of 2.8:1.0 (Automated Staffing Assessment Module III, 2005).

Other provider service options to consider are those focused on the support staff and those pertaining primarily to nurses. A strong primary health care system relies on a strong workforce, and nurses make up a huge part of that workforce. In 2001, New Zealand's Ministry of Health developed a Primary Health Care Strategy Team, which recognized an increased need for primary care nurses with a greater focus on population

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[10] Army standard non-availability time is time dedicated to military training. Some examples are weapons qualification ranges, Army physical fitness tests, mandatory training sessions, and common skills testing.

growth and emphasis on a wider range of services. In that context, it studied nursing roles and responsibilities within primary care. Although no ratios were provided in this study for nurses to providers, it was determined that nurses need to specialize as nurse practitioners to enhance the quality of care, and to provide greater range of services within primary care. Nurse practitioners are able to specialize in primary care with the capability of evaluating and treating patients (New Zealand's Ministry of Health, 2005).

Dr. Robert Phillips states in an article published in the British Medical Journal (2005) that primary care in the U.S. is delivered by three specialties: family medicine, general internal medicine, and general pediatrics. The specialties have a combined workforce of 222,000 providers whose primary function is to direct patient care. There is at least one doctor for every 1,321 people within the United States (Phillips, 2005). This ratio of primary care provider to patient is similar to the ASAM III staffing model with one provider for every 1,178 beneficiaries.

Even though primary care is the entry point into the healthcare system and is used by most Americans, this area of practice is facing multiple problems. Many of the issues and concerns raised in the past few years remain; these include professional dissatisfaction, long hours, high stress, poor

reimbursement, limited scope of practice, and the challenge of attracting new physicians (Phillips, 2005).

These issues also affect the provision of care within military healthcare system. The availability of primary care providers is limited; Womack, for example, experiences a 6 to 8 month lag time in filling such positions (MAJ Sharon Henderson, Chief of Managed Care, personal communication, January 2006). The lower salaries of providers in primary care compared with specialists dissuade medical students from primary care. The median salary for a generalist physician in the U.S. is currently about $130,000, whereas a radiologist will earn $298,000 (Phillips, 2005). These salaries are comparable to the salaries that military primary care providers and specialists earn (MAJ Sharon Henderson, personal communication, January 2006). Womack is experiencing the same situation with limited available providers, long working hours, and over-enrollment of beneficiaries (due to limited providers). Some solutions, as posed in the Journal of Advanced Nursing in June 2001, are to incorporate a skill mix of providers to meet the health care needs of the population and to enhance recruiting and retention of primary care providers. The skill mix of providers would include the use of nurse practitioners and physicians assistants (Jenkins-Clarke, and Carr-Hill, 2001). This would reduce the need for primary care physicians, save money on salaries, and

still provide quality and assessable healthcare for Womack's beneficiaries.

Infrastructure

The facilities guidance for military treatment facilities, to include primary care clinics, is provided by DoD Healthcare Facilities Planning Agency[11] and is outlined in its Medical Planning Criteria and Medical Equipment Guide Plates (2006). Using an estimated enrolled population, Womack's Facilities Department determined the total square footage required for a primary care clinic to support the increased beneficiary population, to include examination rooms, screening rooms, general purpose treatment rooms, and ancillary service areas (Medical Planning Criteria and Medical Equipment Guide Plates, 2006).

The analysis also used the DoD Facilities Pricing Guide (2003). The guide provides planning, design, construction, sustainment, restoration, and modernization criteria for Womack. This guide provides unit cost data and related adjustment factors for DoD facilities intended for use in developing project-level estimates (DoD Facilities Pricing Guide, 2003).

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[11] The Healthcare Facilities Planning Agency is responsible for providing guidance on space criteria through utilization of an estimated enrolled population, and the required number of provider and support staff FTEs.

Purpose

The primary focus of this requirements analysis is to determine what impact the increased beneficiary population will have on the primary care sites within Womack and what resources will be required to support the new, larger beneficiary population.

Scope

The scope of this analysis is to determine the requirements necessary to expand primary care services at Womack. Primary care on Ft. Bragg is provided at four primary care clinics: Robinson, Joel, Clark, and the Womack Family Medicine Residency Clinic. There is also a clinic on Pope Air Force Base that provides primary care to Air Force beneficiaries. The beneficiary population in this study includes both Army and Air Force beneficiaries consisting of active duty service members, family members, retirees, and their family members.

Method and Procedures

A qualitative analysis was conducted to develop and prioritize a primary care enrollment expansion plan for Womack. The purpose of the expansion plan is to ensure the support of the additional 19,663 beneficiaries anticipated as a result of BRAC, the Army Campaign Plan, and the Army Transformation Plan initiatives. The analysis was conducted incrementally and was

designed to assess the current and future requirements for staffing, equipment, facilities, and funding.

Analysis

The analysis first identified the primary care clinic for each unit and service member assigned to Ft. Bragg and Pope Air Force Base. The primary care enrollment location for each of these beneficiaries was based on the assigned strength of the each of the units and the geographic location of the units on Ft. Bragg (displayed in Appendix A). Once the location of the beneficiaries was identified, a staffing, equipment, facilities, and funding analysis were conducted. These analyses were based on the number of beneficiaries enrolled at each of the primary care clinics.

Staffing

The staffing analysis for primary care services was completed using the ASAM III model. The primary care analysis was two-fold. The first step determined whether Womack was meeting the current beneficiary demand for primary care. This was done by analyzing the number of providers and support staff in conjunction with the access standards and current workload demand. The second step assessed the future requirements for providers and support staff based on the population growth projected to occur between FYs 06-11. This step required some mathematical calculations to determine the projected enrollee

population. To conduct these calculations Womack received population growth updates of active duty soldiers to Ft. Bragg for FYs 06-11[12]. These numbers were provided to Womack from the XVIII Airborne Corps' Transformation and Readiness Branch, and were approved by the Department of the Army Operations (G3) Office. The active duty soldier increase is estimated to be 6,460 by FY 11.

To determine the anticipated increase in the number of family members and retirees to be enrolled, a calculation was performed using a ratio of 1.4 family members: 1 active duty soldier.[13] Each primary care clinic utilized this formula to predict its beneficiary growth, which in turn determined the increase in staff, facilities, and equipment for FYs 06-11.

Equipment and Supplies

The increase in equipment was determined by the number of increased exam rooms needed, based on the increased number of providers. As the number of exam rooms increases, additional equipment must be purchased to ensure that all rooms have all required items.

Facilities

This analysis also assessed the requirements to increase Womack's medical facilities to support the projected increase of

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[12] The projections are listed by units and by fiscal years for the units assigned to Ft. Bragg.
[13] The projections are listed by units and by fiscal year for the units assigned to Fort Bragg, NC.

enrolled beneficiaries and needed staff. A facilities analysis was conducted following the guidance published by the DoD Healthcare Facilities Planning Agency (2003).

Funding

Womack's Directorate of Business Operations will continue to conduct funding analyses to include the staffing, equipment, and facility requirements. The resource requirements were submitted in an information paper to U.S. Army Medical Command and routed to Office of the Surgeon General for final approval and allocation of resources. The information paper included requirements for personnel and equipment and an assessment of needed changes to infrastructures.

Results

Womack's primary care must increase current staff availability to meet workload demand. Each of the clinics is experiencing a shortfall of staff members that is impacting access to care. Table 3 depicts the results of the current staffing analysis of providers and support staff. It displays the clinics' enrollment, ASAM III staffing model required FTEs, and the number of FTEs required meeting the ASAM III standard. Some clinics need more than the ASAM III ratio of required support to meet the current workload demand.

Table 3
Total staff requirements to meet current workload demand

Clinic	Robinson	Clark	Joel	Womack	Total
Enrollment	24,092	36,191	20,527	17,042	97,852
Provider	10	24	18	16	68
Support Staff	1	37	3	6	47

Note: Staff requirements are based on ASAM III staffing model

The impact of BRAC, the Army Campaign Plan, and the Army Transformation Plan on Womack's primary care is 19,663 new beneficiaries, with an estimated primary care beneficiary enrollment of 122,720 by FY 11. The beneficiary growth is estimated to result in an increase of 214,413 outpatient encounters per year. This additional workload is estimated to result in an additional required 323 FTEs, consisting of 85 provider-FTEs and 238 support staff-FTEs. Funding will be needed for additional staff (providers and support staff) and to purchase equipment and supplies for the primary care clinics.

Table 4
Timeline for projected primary care beneficiary gains by fiscal year (FY), full-time equivalents (FTEs), and military construction

	FY06	FY07	FY08	FY09	FY10	FY11	Total
Active Duty	1,539	2,624	3,090	-19	1,116	110	6,460
Family Members/ Retirees/ Retiree Family Members	2,155	3,674	5,683	-27	1,562	154	13,201
Gains	3,694	6,298	6,773	-46	2,678	264	19,663
Provider Full-time Equivalents	3	5	7	0	2	0	17
Support Staff Full-time Equivalents	8.4	14	19.6	0	5.6	0	47.6
Military Construction:	$29.2 million						

*Note: Full-Time Equivalents based on MEDCOM ASAM III Application, and 4 January 2006 XVIII Corps numbers.

An additional result of this study was the requirement for two major military construction projects. First is the addition of 45,000 square feet to Robinson Health Clinic at an estimated cost of $16 million. This compensates for the increase in the 82nd Airborne Division population, i.e., approximately 9,420 beneficiaries due to BRAC and the Army Campaign Plan. If this construction project is not funded: (a) active duty family members will need to be enrolled to other clinics on post which are all currently at maximum capacity (118%) or; (b) active duty family members will need to be enrolled to TRICARE network (HealthNet) primary care providers. HealthNet, the managed care support contractor for TRICARE North (TRO North), projects the

local network can absorb a maximum of 5,000 new Prime enrollees (Mr. Dave Amos, Director of Field Optimization for TRICARE Region North, personal communication, January 2006). If these active duty family members were to be enrolled to network providers, Womack could potentially lose 44,003 relative value units,[14] with a value of $3.3 million in FY 06 dollars.

The second construction project is a 31,200 square foot consolidated family medicine clinic, which would be designated to provide care for approximately 12,000 beneficiaries resulting from the relocation of U.S. Forces Command and U.S. Army Reserve Command, and 4,157 due to the closure of the Pope Air Force Base primary care clinic. Additionally, approximately 5,000 beneficiaries enrolled to other primary care clinics, which are currently over-enrolled, would be shifted to this new clinic. If this construction project is not funded (a) active duty personnel will need to be enrolled to other clinics on post which are all currently over-enrolled (average is 118% of maximum capacity); or (b) active duty family members, retirees, and retiree family members will need to be enrolled to network providers. If these beneficiaries were to be enrolled to network providers, Womack could potentially lose 72,704 relative value units with a value of $5.4 million.

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[14] Relative Value Units are weighted measures associated with ambulatory patient care and are assigned based on the evaluation and procedures for each patient encounter. A relative value unit has three components: (a) physician work which includes physician time, technical skill, physical effort, mental effort, judgment, and stress due to the potential risk to the patient; (b) practice expense; and (c) professional liability.

As a result of BRAC, the Army Campaign Plan, and the Army Transformation Plan, Womack received an additional $3.7 million from U.S. Army Medical Command to support the beneficiary increase for FY 06. The Directorate of Primary Care will utilize these funds to hire additional personnel and equipment. Any remaining funds will be utilized by Womack's specialty care services.

Discussion

Currently, Womack's primary care clinics are at 118% of maximum enrollment (Business Plan, 2006). Consequently, Womack requires additional resources in the form of staffing, equipment, facilities, and funding to accommodate the current and projected workload. Womack will be impacted with an overall growth of 19,663 beneficiaries, with each clinic experiencing the impact differently. Table 5 displays the enrollment changes Womack's primary care will experience from FY 06-11.

Table 5
Primary care's population enrollment changes from fiscal years (FYs) 06-11 by clinic.

	FY06	FY07	FY08	FY09	FY10	FY11	Total
Robinson	9,420	0	0	0	0	0	9,420
Clark	-3,187	2,090	1,766	-2,458	1,771	0	-18
Joel	-2,990	1,135	739	-302	-281	264	-1,435
Womack	451	3,072	110	29	0	0	3,662
New Clinic	0	0	4,157	2,686	1,188	0	8,031
Total	3,694	6,298	6,773	-46	2,678	264	19,663

*Note: Fiscal Year 2005 is the base enrollment year.

Enrollment

The staffing requirements analysis was conducted in two steps. The first step analyzed Womack's ability to meet current workload demand and is displayed in Table 3 (pg 27). This was done by analyzing the number of available provider-FTEs and comparing that to the ASAM III staffing model requirements. The second step analyzed the projected requirements based on the estimated beneficiary population growth; this is displayed in Table 4 (pg 28). To determine this projected growth some mathematical calculations were performed. The Ft. Bragg active duty population numbers were provided by the XVIII Airborne Corps and were used to obtain the total enrollment (Mr. Edward Bradshaw, Director of XVIII Airborne Corps Transformation and Readiness, personal communication, January 2006). Pope Air Force

Base's active duty personnel will continue to receive care from the clinic on Pope Air Force Base until the new consolidated primary care clinic is constructed; that clinic will become the primary clinic for the 2,000 active duty personnel that will remain on Pope Air Force Base. Calculations were used to obtain the total beneficiary enrolled population: (a) formula to calculate family members - the number of enrolled active duty soldiers multiplied by 1.4 (family member ratio), which equals the number of enrolled family members; and (b) formula to calculate total beneficiaries enrolled in each primary care clinic (active duty soldiers and their family members) - the number of enrolled active duty soldiers plus the calculated number of enrolled family members, which equals the total enrolled beneficiary population.

The calculation used to estimate the projected growth by clinic can be illustrated by looking at the data of Robinson Health Clinic. The clinic will increase by 9,420 beneficiaries in FY 06. The breakout for the growth is 3,922 active duty soldiers and 5,490 family members. The formulaic calculation for beneficiary population growth at Robinson Health Clinic is 3,922 active duty soldiers x 1.4 = 5,490 family members; 3,922 active duty soldiers + 5,490 family members = 9,420 at Robinson Health Clinic.

Once the projected growth was calculated, the total enrollment for each fiscal year could be determined. The projected enrollment was then added to the current enrollment to obtain the total clinic enrollment for each fiscal year. The clinics' enrollment for each fiscal year is displayed in Table 6. As the population shifted among the clinics, so did the staffing requirement for each of the clinics. Appendices B-H display the clinics and specific staffing positions, with associated costs, that are needed to support the beneficiary growth.

Table 6
Primary care's enrollment from fiscal years (FYs) 06-11

	FY06	FY07	FY08	FY09	FY10	FY11
Robinson	33,512	33,512	33,512	33,512	33,512	33,512
Clark	33,004	35,094	36,860	34,402	36,173	36,173
Joel	17,537	18,672	19,411	19,109	18,828	19,092
Womack	17,493	20,565	20,675	20,704	20,704	20,704
New Clinic	0	0	4,157	6,843	8,031	8,031
Total	101,546	107,844	114,616	114,569	117,248	117,512

Equipment and Supplies

Robinson Health Clinic's equipment requirement of $690,665 was derived from the costs of the materials needed for examination rooms, clinic waiting area, and automation equipment (displayed in Appendix D). The supply budget depicts the

increased dollar amount based on the increase in annual visits. The supply budget is derived by dividing the annual supply budget of $141,000 by the average number of current visits of 90,000, which equals $1.57 per visit.

Family members are the primary utilizers of Robinson Health Clinic because the active duty soldiers receive care at the battalion aid stations. By the end of FY 06, the number of family members will increase by 5,940, and the clinic expects at least four family member visits per year (based on historical trends) for a total of 23,760 family member visits. Robinson Health Clinic also anticipates a 20% increase in active duty soldier visits for a total of 2,400 visits. Combining active duty visits and family member visits; the total annual visits will increase to 26,160. The supply budget can be calculated by multiplying the number of annual visits by the cost per visit ($1.57), resulting in an annual supply budget of $41,071.

Facilities

Space requirements for primary care and ancillary services were projected to be over 76,200 square feet and cost $29 million, for the two separate military construction projects. The first project is the Robinson Health Clinic addition/alteration. The clinic addition would be 35,000 square feet, and the alteration would be 10,000 square feet. The addition includes eight examination rooms, an obstetrics and

gynecologic examination room, and expansion of the existing physical therapy, optometry, orthopedics, and podiatry areas within the clinic. The clinic alteration includes expanding the area for mental health and administration rooms.

The second project is the consolidated family medical clinic, which is estimated to have 31,200 square feet and will include 20 examination rooms, four examination rooms for flight medicine, two examination rooms for mental health, two optometry lanes (screening and examination rooms), and two rooms for immunizations rooms, and two rooms for audiology screening. A comprehensive analysis as to the types and number of specific rooms can be found in Appendix H. Those appendices will identify the number of individual offices, exam rooms, and linen closets allocated to each section.

Resource Prioritization

Womack has prioritized resource allocation to primary care over specialty care, inpatient care, and ancillary services because primary care is the healthcare entry point for patients, as stated by Dr. Robert Phillips in the British Medical Journal (2005). The order of precedence, within primary care, for receiving resources has been established in the order of Robinson Health Clinic, Clark Health Clinic, and Womack Family Medicine Clinic (COL Ronald Maul, Womack Commander, personal communication, November 2005). Robinson Health Clinic will

receive the initial resources since it is impacted by BRAC, the Army Campaign Plan, and the Army Transformation Plan within FY 06. Clark Health Clinic will receive resources in FYs 06-07 to support its current demand. Womack Family Medicine Clinic will receive resources from FYs 09-11 due to the impact from BRAC, the Army Campaign Plan, and the Army Transformation Plan. The spreadsheets displaying the staffing and equipment resources allocated to each clinic are in Appendices B-H.

Conclusion

Womack is continuously striving to maintain the status of a Medical Center of Excellence. The Base Realignment and Closure Plan, the Army Campaign Plan, and the Army Transformation Plan require Ft. Bragg to activate, inactivate, convert, and relocate at least 38 units within 6 years. New procedures and policies must be established and a great deal of coordination must take place among Womack and the units impacted. This analysis addressed the requirements of the primary care clinics and the services offered in them. It determined that additional staff, equipment, medical clinics, and funding are required to meet the beneficiary population growth. Womack's assessment of the BRAC, the Army Campaign Plan, and the Army Transformation Plan requirements was forwarded to MEDCOM and to the Office of the Surgeon General. Womack was provided $3.7 million for the

additional requirements stated by this analysis. Womack has a strong and positive reputation on Ft. Bragg and through the development of a plan to support the changing unit organization on Ft. Bragg, Womack will only enhance its reputation and remain the choice of *America's Finest*[15].

Recommendations

Although this analysis focuses on primary care, BRAC, the Army Campaign Plan, and the Army Transformation Plan will impact additional Womack services. A continuation of this analysis should focus on inpatient care, ancillary services, and specialty care to determine the number of providers and associated support staff required to support BRAC, the Army Campaign Plan, and the Army Transformation Plan. Womack should establish an internal medical actions processing team to conduct this analysis, using the ASAM III staffing model and based on the number of beneficiaries who have historically utilized these services. Implementation strategies and procedures for measuring productivity must be developed to ensure the requirements of all the departments are met. The goal is to seamlessly integrate all required changes into Womack's healthcare system.

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[15] *America's Finest* is a phrase used to describe soldiers assigned to units stationed on Ft. Bragg.

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Appendices

Appendix A - Unit Enrollment Assignments per Primary Care Clinic

Appendix B - Robinson Health Clinic's Staffing Requirements and Costs for Fiscal Year 2006

Appendix C - Robinson Health Clinic's Equipment Requirements and Costs for Fiscal Year 2006

Appendix D - Clark Health Clinic's Staffing Requirements and Costs for Fiscal Years 2006-2007

Appendix E - Womack Family Medicine Health Clinic's Staffing Requirements and Costs for Fiscal Year 2007

Appendix F - Womack Family Medicine Health Clinic's Staffing Requirements and Costs for Fiscal Year 2008

Appendix G - Womack Family Medicine Health Clinic's Staffing Requirements and Costs for Fiscal Year 2009

Appendix H - Womack Family Medicine Health Clinic's Staffing Requirements and Costs for Fiscal Year 2010

Appendix I - Authorized Square Footage for Department of Defense Medical Facilities

Appendix A. Unit Enrollment Assignments per Clinic

Primary Care Clinic	Unit Gains	Unit Loses
Robinson Health Clinic		
	4th Brigade Combat Team	None
	Combat Aviation Brigade	
Joel Health Clinic		
	All Air Defense Artillery (108th Air Defense Artillery Brigade, 3-4 Air Defense Artillery Battalion, 1-7 Air Defense Artillery Battalion	1-58 Air Traffic Service Battalion
	Sustainment Brigade (Headquarters, Headquarters Company, Finance, and Signal from Robinson Health Clinic)	1st Combat Support Command Headquarters
	1st Theater Support Command	18th Aviation Brigade
	192nd Explosive Ordnance Battalion Growth	4/159th Headquarter, Headquarters Detachment
	22nd Public Affairs Detachment	
Clark Health Clinic		
	3rd Special Operations Group	35th Signal Brigade
	18th Fires Brigade	528th Special Operations Support Battalion
	20th Engineer Brigade	7th Special Operations Group
Womack Family Residency Health Clinic		
	525th Battlefield Surveillance Battalion	None
	Base Realignment and Closure Discretionary:	
	•16th Military Police Brigade, 32nd Military Police Detachment (Criminal Investigations Division)	
	•416th Engineer Command	
	•U.S. Army Mission Support Element	
	•10th Headquarters, Headquarters Press Camp	
	•44th Department of Military History	
	• Military Police Dog Handling Team	
New Treatment Clinic		
	• U.S. Forces Command • U.S. Army Reserve Command Headquarters	None
	• Retirees/ retiree family members	

	• Pope Air Force Base	
	– Active duty/active duty family members/retirees/ retiree family members	

Appendix B. Staffing Analysis for Robinson and Joel Health Clinics' Requirements for Fiscal Year 2006 under Base Realignment and Closure, the Army Campaign Plan, and the Army Transportation Plan

Fiscal Year 2006 Base Realignment and Closure, the Army Campaign Plan and the Army Transformation Plan				
Robinson Health Clinic Personnel Hiring Actions	Number of Full-Time Equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Providers				
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Pediatrician	1	Contract	$ 15,815	$ 189,779
Physician Assistant	1	General Schedule 12	$ 9,366	$ 112,389
Nurse Practitioner	1	Contract	$ 14,422	$ 173,066
Total Provider Full-Time Equivalent and Cost	5			$ 844,814
Support Staff				
Registered Nurses				
•Supervisory Clinical Nurse	1	General Schedule 11	$ 6,350	$ 76,204
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
Licensed Practical Nurses				
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
Clinical Nursing Assistants				
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Medical Support Assistant				

•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Ancillary Support Staff				
Laboratory Technician	1	General Schedule 7	$ 3,406	$ 40,876
Radiology Technician	1	General Schedule 7	$ 3,406	$ 40,876
Pharmacist	0.5	General Schedule 12	$ 3,609	$ 44,285
Physical Therapist	1	General Schedule 9	$ 4,667	$ 55,997
Physical Therapy Technician	1	General Schedule 7	$ 3,406	$ 40,876
Total Support Staff Full-Time Equivalents and Cost	23.5			$ 1,142,576
Total Personnel Full-Time Equivalents and Cost	28.5			
Hiring Actions Submitted				
Joel Health Clinic	Number of Full-time equivalents	Pay Grade	Monthly Cots Per	Annual Cost Per
Providers				
Family Medicine Physician-Flight Surgeon	1	Contract		$ 21,380
Family Medicine Physician-Flight Surgeon	1	General Schedule 14	$ 15,399	$ 184,790
Total	1			$ 206,170
Total Full-Time Equivalents and Cost for Personnel	29.5			$ 2,193,560

Appendix C. Equipment and Supplies Analysis for Robinson Health Clinic Requirements for Fiscal Year 2006 under Base Realignment and Closure, the Army Campaign Plan, and the Army Transportation Plan

Fiscal Year 2006 Base Realignment and Closure Equipment, the Army Campaign Plan and the Army Transformation Plan				
Projected Equipment Requests to be Submitted				
Robinson Health Clinic	Equipment Type	Number Requested	Cost Per	Total Cost
Primary Care Supplies			Unit Price	Total Cost
	Gastrointestinal Endoscopy Scopes	2	$ 22,000	$ 44,000
	Gastrointestinal Colonoscopy Scopes	2	$ 27,000	$ 54,000
	Gastrointestinal Electrocauter	1	$ 7,000	$ 7,000
	Miscellaneous Expendable Sup	1	$ 15,000	$ 5,000
	Computers	53	$ 1,400	$ 74,200
	Printers	15	$ 650	$ 9,750
	Workstations	53	$ 2,500	$ 132,500
	Phones	53	$ 170	$ 9,010
	Exam Tables	27	$ 1,059	$ 28,593
	Exam Table Lights	27	$ 580	$ 15,660
	Screening vs Machines	27	$ 2,081	$ 56,187
	Dopplers	27	$ 950	$ 25,650
	Oto/Ophthalmo Scopes	27	$ 565	$ 15,255
	Computers	48	$ 1,400	$ 67,200
	Printers	12	$ 650	$ 7,800
	Workstations	48	$ 2,500	$ 120,000
	Phones	48	$ 170	$ 8,160
	Cards (Phone Infrastructure)	2	$ 1,100	$ 2,200
	Jacks	50	$ 10	$ 500
	Switch (Data Infrastructure)	1	$ 8,000	$ 8,000
Total				$ 690,665
Projected Supply Budget Increase				
Robinson Health Clinic	Increase in Visits	Cost per Visit	Total Cost	
Projected Supply Budget (based on growth)				
Supplies per increase in annual patient visits				
•Increase in Family Member visits	12,652	$ 1.57	$ 19,864	
•Increase in Active Duty visits	400	$ 1.57	$ 628	
Total	0		$ 20,492	

Appendix D. Staffing Analysis for Clark Health Clinic Requirements for Fiscal Years 2006-2007 under Base Realignment and Closure, the Army Campaign Plan, and the Army Transportation Plan

Fiscal Year 2007 Base Realignment and Closure, the Army Campaign Plan and the Army Transformation Plan				
Clark Health Clinic Personnel Hiring Actions	Number of Fill-Time Equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Providers				
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Pediatrician	1	Contract	$ 15,815	$ 189,779
Internal Medicine	1			
Internal Medicine	1			
Physician Assistant	1	General Schedule 12	$ 9,366	$ 112,389
Physician Assistant	1	General Schedule 12	$ 9,366	$ 112,389
Nurse Practitioner	1	Contract	$ 14,422	$ 173,066
Total Provider Full-Time Equivalent and Cost	9			$ 141,993
Support Staff				
Registered Nurses				
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
Licensed Practical Nurses				
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333

•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
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•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
Ancillary Services				
Laboratory Technician	1	General Schedule 7	$ 3,406	$ 40,876
Radiology Technician	1	General Schedule 7	$ 3,406	$ 40,876
Pharmacist	0.5	General Schedule 12	$ 3,609	$ 44,285
Pharmacy Technician				
Total Support Staff Full-Time Equivalents and Cost	26.5			$1,422,205
Total Personnel Full-Time Equivalents and Cost	35.5			
Projected Hiring Actions to be Submitted				
Clark Health Clinic	Number of Full-time equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Projected Support Staff (based on growth)				
•Medical Support Assistant	5	General Schedule 4	$ 3,096	$ 185,765
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Healthcare Coordinator	1	General Schedule 6	$ 3,861	$ 46,333

Total	8			$ 315,584
Total Full-Time Equivalents and Cost	43.5			$ 2,879,782

Appendix E. Staffing Analysis for Womack Family Medicine Health Clinic Requirements for Fiscal Year 2007 under Base Realignment and Closure, the Army Campaign Plan and the Army Transportation Plan

Fiscal Year 2007 Base Realignment and Closure, the Army Campaign Plan and the Army Transformation Plan				
Womack Family Residency Health Clinic Personnel Hiring Actions	Number of Full-time Equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Providers				
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Physician Assistant	1	General Schedule 12	$ 9,366	$ 112,389
Nurse Practitioner	1	General Schedule 12	$ 9,366	$ 112,389
Total Provider Full-Time Equivalents and Cost	3			$ 409,568
Support Staff				
Registered Nurses				
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
Licensed Practical Nurses				
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
Clinical Nursing Assistants				
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Medical Support Assistants				
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Total Support Staff Full-Time Equivalents and Cost	8			$ 347,786
Total Personnel Full-Time Equivalents and Cost	11			$ 757,354

Appendix F. Staffing Analysis for Womack Family Medicine Health Clinic Requirements for Fiscal Year 2008 under Base Realignment and Closure, the Army Campaign Plan, and the Army Transportation Plan

Fiscal Year 2008 Base Realignment and Closure, the Army Campaign Plan, and the Army Transformation Plan				
New Consolidated Family Clinic Personnel Hiring Actions	Number of Full-Time Equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Providers				
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Physician Assistant	1	General Schedule 12	$ 9,366	$ 112,389
Nurse Practitioner	1	General Schedule 12	$ 9,366	$ 112,389
Total Provider Full-Time Equivalents and Cost	3			$ 409,568
Support Staff				
Registered Nurses				
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
Licensed Practical Nurses				
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
Clinical Nursing Assistants				
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Medical Support Assistants				
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,097	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Total Support Staff Full-Time Equivalents and Cost	10			$ 431,272
Total Personnel Full-Time Equivalents and Cost	13			$ 840,840

Appendix G. Staffing Analysis for Womack Family Medicine Health Clinic Requirements for Fiscal Year 2009 under Base Realignment and Closure, the Army Campaign Plan and the Army Transportation Plan

Fiscal Year 2009 Base Realignment and Closure, the Army Campaign Plan, and the Army Transformation Plan				
Womack Family Residency Health Clinic Personnel Hiring Actions	Number of Full-time Equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Providers				
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Physician Assistant	1	General Schedule 12	$ 9,366	$ 112,389
Nurse Practitioner	1	General Schedule 12	$ 9,366	$ 112,389
Total Provider Full-Time Equivalent and Cost	3			$ 409,568
Support Staff				
Register Nurses				
•Clinical Nurse	1	General Schedule 10	$ 5,780	$ 69,355
Licensed Practical Nurses				
•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
Clinical Nursing Assistants				
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Nursing Assistant	1	General Schedule 4	$ 3,096	
Medical Support Assistants				
•Medical Support Assistant	1	General Schedule 4	$ 3,096	$ 37,153
•Medical Support Assistant	1	General Schedule 4	$ 3,096	
Total Support Staff Full-Time Equivalents and Cost	6			$ 189,994
Total Personnel Full-time Equivalents and Cost	9			$ 599,562

Appendix H. Staffing Analysis for Womack Family Medicine Clinic Requirements for Fiscal Year 2010 under Base Realignment and Closure, the Army Campaign Plan and the Army Transportation Plan

Fiscal Year 2010 Base Realignment and Closure, the Army Campaign Plan, and the Army Transformation Plan				
Womack Family Residency Health Clinic	Number of Full-Time Equivalents	Pay Grade	Monthly Cost Per	Annual Cost Per
Providers				
Family Medicine Physician	1	General Schedule 14	$ 15,399	$ 184,790
Total Provider Full-Time Equivalents and Cost	1			$ 184,790
Support Staff				
Licensed Practical Nurses				
•Practical Nurse	1	General Schedule 6	$ $3,861	$ 46,333

•Practical Nurse	1	General Schedule 6	$ 3,861	$ 46,333
Clinical Nursing Assistants				
•Nursing Assistant	1	General Schedule 4	$ 3,096	$ 37,153
Medical Support Assistants				
Total Support Staff Full-Time Equivalents and Cost	3			$ 129,819

Appendix I. Authorized Square Footage for DoD Medical Facilities

Function	Authorized Net Square Footage	Planning Range/Comments
Clinic Waiting	60	Minimum. Provide three seats per each projected Full-Time Equivalent provider. Provide 16 net square footage for 95% of the seats and 25 net square footage for 5% of the seats (handicapped waiting). Note: this space can be divided into separate Well and Isolation waiting areas. If divided, recommend providing 67% of space for a main waiting area.
Reception	140	Minimum. Provide 140 net square footage for the first eight providers. Increase 60 net square footage for each increment of four providers over the initial eight providers.
Adult Screening Room	80	Minimum of one for up to four projected Full-Time Equivalent providers. One additional room for increment of four providers or portion thereof. Subtract pediatric rooms
Provider Exam Room	120	Army - Two per projected Full-Time Equivalent. (Also note resident examination rooms.)
Isolation Room	140	One per clinic. (negative pressure)
General Purpose Treatment Room	175	One for up to six projected Full-Time Equivalent providers. One additional room for increment of six providers or portion thereof.
Provider Office	120	Army - One per projected Full-Time Equivalent staff provider. (See also Residency Program section.)
Nurse Manager Office	120	Private office, Standard Furniture. One per Nurse Manager Office projected Full-Time Equivalent Nurse Manager.
Nurse Work Room	120	Army/Navy/VA. Minimum. Add 120 net square footage for each increment of four Full-Time Equivalent nurses.

NCOIC Office	120	One per projected Full-Time Equivalent.
Patient Toilet	50	One if number of projected Full-Time Equivalent providers is between three and eight. Provide two toilets if number of projected Full-Time Equivalent providers is between nine and fifteen. Provide three toilets if number of projected Full-Time Equivalent providers is sixteen or more with a maximum of three toilets.
Appointment Clerk Cubicle	60	One per projected Full-Time Equivalent Appointment Clerk
Admin Person w/ Private Office	120	One per projected Full-Time Equivalent requiring a private office. See Section 2.1. Some examples are Group Practice Manager, Nurse Educator, Health Care Integrator, any staff who interviews or counsels patients.
Admin Cubicle	60	Per projected Full-Time Equivalent requiring a dedicated work - space but not a private office.
Conference Room	250-400	Use CRA01, one per department, with between 8 and 12 officers or officer equivalent personnel. For increase in size (CRA02 and CRA03) see Section 2.1.
Staff Lounge	140	Minimum, if at least 10 Full-Time Equivalent on peak shift Add 5 net square footage for each peak shift full-time equivalent over 10. Maximum size not to exceed 300 net square footage. Add 20 net square footage if vending machines are included.
Staff Toilets	50	Minimum for total clinic staff of at least ten. See Section 6.1 for increase in size and for male/female breakdown.
Personal Property Lockers	20	For staff without a dedicated office/cubicle space. See Section 6.1 for increase in size or for Locker Room, Changing criteria.
Equipment Storage	100	One per clinic.

Clean Utility	120-180	120- For up to 6 projected Full-Time Equivalent providers. 150- For 7 - 12 projected Full-Time Equivalent providers. 180- For more than 12 projected Full-Time Equivalent providers.
Soiled Utility	90-150	90- For up to 6 projected Full-Time Equivalent providers 120- For 7-12 projected Full-Time Equivalent providers 180- For more than 12 projected Full-Time Equivalent providers
Crash Cart Alcove	20	One per clinic. Can be shared between several clinics if fully accessible to all